

Atty Dkt. No.: 10021298-1
USSN: 10/633,609

AMENDMENTS TO THE CLAIMS

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Please incorporate the following amendments to the subject application.

In the Claims:

1. (Previously Presented) A method, comprising:
receiving a request for a test which uses a sub-array of a chemical array with probes at multiple feature locations;
retrieving a pattern of locations of features that make up the sub-array from a memory using the test request, which memory carries said pattern for the sub-array;
exposing said array to a sample; and
reading said sub-array.
2. (Original) A method according to claim 1 wherein the memory carries multiple sub-array patterns for the array each of which is retrievable with a different test request.
3. (Original) A method according to claim 1 additionally comprising reading an array identifier associated with the chemical array unit, and wherein the sub-array pattern is retrieved from the memory using both the array identifier and the test request, which memory carries multiple sub-array patterns for each of multiple arrays each sub-array pattern retrievable with a different combination of array identifier and test request.
4. (Original) A method according to claim 3 wherein the array unit carries the array identifier.
5. (Previously Presented) A method according to claim 1 wherein after the array has been exposed to a sample, the method additionally comprising reading the chemical array and wherein signal data representative of binding of a sample component is not acquired and saved from feature locations outside any retrieved sub-array pattern.

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6. (Previously Presented) A method according to claim 1 wherein after the array has been exposed to a sample, the method additionally comprising reading the chemical array and wherein one or more of: (a) signal data representative of binding of a sample component is acquired and saved from feature locations based on one or more retrieved sub-array patterns; or (b) a same signal processing method is applied to acquired signal data representative of binding of a sample component from feature locations based on one or more retrieved sub-array patterns.

7. (Original) A method according to claim 6 wherein the test request is associated with the array.

8. (Original) A method according to claim 7 wherein the array unit carries an array identifier and the test request is associated with the array identifier.

9. (Original) A method according to claim 6 additionally comprising: reading an array identifier associated with the chemical array unit, and wherein the sub-array pattern is retrieved from the memory using both the array identifier and test request, which memory carries multiple sub-array patterns for the array each retrievable with a different combination of array identifier and test request.

10. (Original) A method according to claim 9 wherein the array identifier and test request are associated with the array.

11. (Original) A method according to claim 7 wherein: multiple requests for tests associated with the array are read, each of which uses a different sub-array of the array; patterns of the sub-arrays are retrieved from memory using both the array identifier and the test requests, which memory carries multiple sub-array patterns each retrievable with a different combination of array identifier and test request.

12. (Original) A method according to claim 6 wherein the method comprises the acquiring and saving signal data representative of binding of a sample

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component from feature locations based on one or more retrieved sub-array patterns.

13. (Original) A method according to claim 12 wherein feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component.

14. (Withdrawn) A method according to claim 13 wherein the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of binding of a sample component thereto having been prevented.

15. (Withdrawn) A method according to claim 13 wherein: signal data of feature locations in a sub-array is acquired from reading signal from a label at those feature locations; and the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of having an excess of the label thereon or having a material thereon which prevents reading of signal data representative of binding of a sample component.

16. (Withdrawn) A method according to claim 15 wherein the label is a fluorescent label.

17. (Original) A method according to claim 13 wherein the feature locations outside any retrieved sub-array pattern are incapable of providing signal data representative of binding of a sample component as a result of probes at those feature locations having been damaged to prevent binding.

18. (Original) A method according to claim 17 wherein the probes at the feature locations outside any retrieved sub-array are damaged by cross-linking.

19. (Original) A method according to claim 17 wherein the probes at the feature locations outside any retrieved sub-array are damaged by having been

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cleaved from those feature locations.

20. (Withdrawn) A method according to claim 13 wherein: signal data representative of binding of a sample component at feature locations within a sub-array is acquired from a label at those feature locations; and the feature locations outside any retrieved sub-array are incapable of providing signal data representative of binding of a sample component as a result of the label thereon having been damaged to prevent signal data being obtained from the label.

21. (Withdrawn) A method according to claim 20 wherein the label is a fluorescent or chemiluminescent label, the method additionally comprising damaging the label by bleaching the label at the feature locations outside any retrieved sub-array.

22. (Withdrawn) A method according to claim 12 wherein the total feature locations of all retrieved sub-array patterns is less than all feature locations of the array.

23. (Withdrawn) A method according to claim 22 wherein: signal data representative of binding of a sample component is acquired from array feature locations of each retrieved sub-array pattern by illuminating those locations with an interrogating light and detecting any light emitted in response to the interrogating light; and feature locations outside any retrieved sub-array pattern are not illuminated with the interrogating light.

24. (Withdrawn) A method according to claim 12 wherein: signal data representative of binding of a sample component is acquired from both feature locations within a retrieved sub-array pattern and feature locations outside any retrieved sub-array pattern; and acquired signal data representative of binding of a sample component from the feature locations within a retrieved sub-array pattern is saved in a memory while acquired signal data representative of binding of a sample component for the feature locations outside any sub-array pattern is not saved in the memory.

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25. (Withdrawn) A method according to claim 6 wherein the method comprises applying a same signal processing method to acquired signal data representative of binding of a sample component from feature locations based on one or more retrieved sub-array patterns.

26. (Withdrawn) A method according to claim 25 wherein the same signal processing method comprises an encryption method based on a key, the method additionally comprising applying an encryption method based on a different key to signal data representative of binding of a sample component acquired from feature locations outside any retrieved sub-array pattern.

27. (Withdrawn) A method according to claim 25 wherein the signal processing method comprises a feature extraction method.

28. (Withdrawn) A method according to claim 27 wherein no feature extraction method is applied to feature locations outside any retrieved sub-array pattern.

29. (Withdrawn) A method according to claim 25 wherein: multiple requests for tests associated with the array are read, each of which uses a different sub-array of the array; and patterns of the sub-arrays are retrieved from memory using both the array identifier and the test requests, which memory carries multiple sub-array patterns each retrievable with a different combination of array identifier and test request.

30. (Withdrawn) A method according to claim 29 wherein: different signal processing methods are applied to the acquired signal data from features of different retrieved sub-array patterns.

31. (Withdrawn) A method according to claim 30 wherein the test requests are associated with the array.

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32. (Withdrawn) A method according to claim 30 wherein results from applying the different signal processing methods to acquired signal data representative of binding of a sample component from different sub-arrays, are independent such that a result from one sub-array cannot be derived from a result from one or more other sub-arrays.

33. (Withdrawn) A method according to claim 30 wherein results from applying the different signal processing methods to acquired signal data representative of binding of a sample component from the different patterns are forwarded to different locations.

34. (Original) A method according to claim 1 wherein the array has been exposed to a sample obtained from an individual and wherein the sub-array pattern is retrieved also using an identification of the individual.

35. (Withdrawn) A method according to claim 30 wherein results from applying some of the different signal processing methods to acquired signal data from the different sub-arrays, are rejected based on a comparison of the results or a comparison of a characteristic of the feature locations in the different sub-arrays.

36. (Withdrawn) A method of reading a chemical array unit having a chemical array with probes at multiple feature locations and which has been exposed to a sample, the method comprising reading the array wherein feature locations have been rendered incapable of providing signal data representative of binding of a sample component.

37. (Withdrawn) A method of using a chemical array unit having a chemical array with probes at multiple feature locations, comprising rendering a predetermined pattern of feature locations incapable of providing signal data representative of binding of a sample component.

38. (Withdrawn) A method according to claim 37 wherein the array has been exposed to a sample, the method comprising: acquiring signal data from

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feature locations which have not been rendered incapable of providing signal data representative of binding a sample component.

39. (Withdrawn) A method according to claim 38 wherein: signal data from feature locations is acquired from a label at those feature locations; and rendering feature locations incapable of providing signal data representative of binding of a sample component comprises damaging a label at those feature locations to prevent signal data being obtained from the label.

40. (Withdrawn) A method according to claim 38 wherein the predetermined pattern of feature locations rendered incapable of providing signal data representative of binding a sample component consists of less than all the feature locations.

41. (Withdrawn) A method according to claim 38 wherein the rendering and the acquiring are executed in a same apparatus.

42. (Withdrawn) A method according to claim 41 wherein the rendering and the acquiring are executed while the array unit remains seated in a same holder.

43. (Withdrawn) A method according to claim 37 additionally comprising: exposing the array to a sample.

44. (Withdrawn) A method according to claim 43 wherein the rendering a predetermined pattern of feature locations incapable of providing signal data representative of binding a sample component is performed before or during exposing the array to the sample.

45. (Withdrawn) A method according to claim 37 additionally comprising: reading a request for a test which uses a sub-array of the array; and retrieving a pattern of the sub-array from a memory using the test request, which memory carries multiple sub-array patterns for the array each retrievable with a different test request; wherein: the predetermined pattern of feature locations rendered incapable of

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providing signal data representative of binding of a sample component, comprises feature locations outside any retrieved sub-array pattern.

46. (Withdrawn) A method according to claim 37 wherein the rendering comprises selectively preventing binding of a sample component to probes at those feature locations.

47. (Withdrawn) A method according to claim 46 wherein the selectively preventing comprises activating heating elements at some of the feature locations.

48. (Withdrawn) A method according to claim 37 wherein: a detectable signal is provided by a label which is bound to feature locations at which a sample component is bound to probes; and the rendering comprises providing an excess of the label at those features.

49. (Original) An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: an interrogating source; a detector to detect signal generated in response to the interrogating source; and a processor which causes the apparatus to execute a method of claim 1.

50. (Original) An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: a light source to illuminate array feature locations with an interrogating light, which light source may or may not be the same as the light source of a deactivator; a detector to detect light emitted in response to the interrogating light; and a processor which causes the apparatus to execute a method of claim 2.

51. (Withdrawn) An apparatus for use with a chemical array unit having a chemical array with probes at multiple feature locations, comprising: a deactivator which renders feature locations incapable of providing signal data representative of binding of a sample component; and a processor controlling the deactivator so as to execute a method of claim 35.

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52. (Withdrawn) An apparatus according to claim 51 wherein the processor additionally retrieves the pattern of feature locations to be rendered incapable of providing signal data representative of binding of a sample component, from the memory using the test request.

53. (Withdrawn) An apparatus according to claim 52 wherein the deactivator comprises a power supply controlled by the processor so as deliver power to selected heating elements at array feature locations in accordance with the pattern.

54.-55. (Cancelled)

56. (Original) A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 1.

57. (Original) A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 6.

58. (Withdrawn) A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 37.

59. (Previously Presented) A method comprising retrieving a sub-array pattern of a chemical array from a memory using a test request, which sub-array pattern comprises a plurality of locations of features that make up said sub-array and said memory carries said sub-array pattern for the array which is retrievable with said test request.

60. (Original) A method according to claim 59 wherein the memory carries multiple sub-array patterns for the array each retrievable with a different test request.

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61. (Original) A method according to claim 59 wherein the sub-array pattern is retrieved from the memory using both an array identifier and the test request, which memory carries multiple sub-array patterns for each of multiple arrays, each pattern retrievable with a different combination of array identifier and test request.

62. (Currently Amended) A method according to claim 61 wherein the array identifier and test request are received from a ~~remote~~-location remote from the location of the memory, and the retrieved pattern of less than all the array feature locations is communicated to the remote location.

63. (Original) A computer program product comprising a computer readable medium carrying a computer program which when loaded into a computer executes a method of claim 59.

64. (Previously Presented) The method according to claim 1, wherein feature locations outside of said sub-array pattern are masked.

65. (Previously Presented) The method according to claim 59, wherein said memory does not save acquired signal data for feature locations outside of said sub-array.